



Institute for Empirical Research in Economics
University of Zurich

Working Paper Series
ISSN 1424-0459

Working Paper No. 419

**Making world heritage truly global: the culture
certificate scheme**

Bruno S. Frey and Paolo Pamini

June 2009

Revised version 27 May 2009

***MAKING WORLD HERITAGE TRULY
GLOBAL:
THE CULTURE CERTIFICATE SCHEME***

by
Bruno S. Frey*
University of Zurich, ETH-Zurich
and
CREMA – Center for Research in Economics, Management and the Arts,
Switzerland

and

Paolo Pamini
ETH-Zurich

* Institute for Empirical Economic Research, University of Zurich,

Winterthurerstrasse 30, CH-8006 Zurich, Switzerland. E-mail: bsfrey@iew.uzh.ch.

We are grateful to Isabel Ellenberger for checking the text and an anonymous referee for excellent suggestions for improvement. We thank Christine Benesch, Francoise Benhamou, Reiner Eichenberger, Susanne Neckermann, Sir Alan Peacock, David Throsby and Clement Tisdell for helpful comments.

MAKING WORLD HERITAGE TRULY GLOBAL: THE CULTURE CERTIFICATE SCHEME

Abstract

Culture has attributes of a global public good that needs to be preserved for mankind as a whole. *World Culture Certificates* are proposed to efficiently preserve World Heritage. The community of nations has to agree on the Global Heritage List and how much each nation is to contribute to that purpose. Each World Heritage site conserved is acknowledged through the issuance of a tradable Certificate. Countries and private firms are induced to seek sites where financial resources can be spent most productively. This leads to an efficient allocation of resources to preserve World Heritage.

JEL Classification: Z11, D6, F5, H87.

Keywords: Global public good, World Heritage, Cultural Certificates, Monuments, UNESCO.

I. World Heritage and Conservation Needs

The UNESCO Convention on World Heritage of 1972 “seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity”¹. It aims to preserve monuments, natural and cultural landscapes as a legacy of the past, in order to pass this heritage on to future generations. From its very beginning the convention’s intention has been directed towards the *entire world*. World Heritage is a clear example of a global common good: “The World Heritage List reflects the wealth and diversity of the Earth’s cultural and natural heritage” (UNESCO 2005: 4). The convention goes far beyond established national conservation efforts because it acknowledges that due to the free-rider problem associated with managing preservation on a purely national level the aggregate quantity of preservation is inefficiently low. A host country will pay only to preserve up to the point where the marginal *national* benefit equal marginal cost.

¹ Mission Statement, World Heritage Information Kit, UNESCO (2005: 1). It must be emphasized that UNESCO does not provide any (or at best only minor) financial help; UNESCO provides expertise and scientific support.

The World Heritage movement started in 1959 with the international campaign launched by UNESCO to save the Abu Simbel temples in the Nile valley². At the beginning, World Heritage was directed to cultural sites but since 1968 is also includes natural sites, and since 1992 also stresses significant interactions between people and the natural environment, entitled “cultural landscapes”(UNESCO 2005:10).

This noble ideal has only been attained to a limited extent. In particular, the *distribution* of effort and expenditure to preserve World Heritage is inefficient. A striking fact is that in some countries a large number of most valuable heritage sites can be found that are in extremely dilapidated condition and are in urgent need of restoration but the funds to restore the sites are lacking. At the same time other

² It might be argued that the great attention paid to the seven “Classical World Wonders” (Great Pyramid of Giza, Hanging Gardens of Babylon, Statue of Zeus at Olympia, Temple of Artemis at Ephesus, Mausoleum of Maussolos at Halicarnassus, Colossus of Rhodes and the Lighthouse of Alexandria) were precursors. In 2007, an internet vote with allegedly 100 million participants (www.new7wonders.com) determined the “New Seven Wonders of the World”(the Great Wall of China, Christ the Redeemer on the Corcovado in Rio de Janeiro; Machu Picchu in Peru, Chichen Itza in Mexico, Petra in Jordan, the Taj Mahal in India, and the Coliseum in Rome. Other finalists were, among others, the Acropolis in Athens, the Alhambra, Angkor Wat, Eiffel Tower, Hagia Sophia, Neuschwanstein Castle, Statue of Liberty, Stonehenge, and the Sydney Opera House ([http:// wikipedia.org/New Seven Wonders of the World](http://wikipedia.org/New Seven Wonders of the World), accessed 26 August 2008). Many other organizations care for cultural heritage beyond national boundaries, an example being Europa Nostra, a European-wide movement presided by the prince consort of Denmark.

countries spend a lot of resources on saving and beautifully restoring heritage sites that - *in comparison* - are in much less need. To give an example: In Cuba, especially in Havana, many beautiful buildings are virtually crumbling and falling apart while developed economies such as France, Germany, Austria or Switzerland spend large sums on restoring monuments of lesser importance to world heritage. The point made here is most certainly *not* that the funds are wasted but rather that the same amount of money could contribute *much more* if used for the preservation of heritage sites in some other countries. In other words: some poor countries spend too little “per unit” of world heritage saved while rich countries spend too much. From a *global* point of view, the situation, therefore, is clearly suboptimal and ways to improve this situation should be thought of.

This paper *envisions a solution* to this imbalance by using and applying resources and it discusses the advantages and problems that could arise³. In line with UNESCO, our

³ To my knowledge, this is the first such policy proposal based on economic principles. A comprehensive analysis of heritage issues is provided in Peacock and Rizzo (2008). Other economic analyses devoted to World Heritage mainly evaluate the utility of preserving the past as well as financial consequences. See, for instance, Benhamou 1996, 2003, Frey 1997, Greffe 1999, Klammer and Throsby 2000, Mossetto 1994, Mossetto and Vecco 2001, Netzer 1998, Peacock 1978, 1995, Rizzo 2006, Streeten 2006, Throsby 1997a, 1997b, 2003. See also the collection of articles in Hutter and Rizzo 1997, Peacock 1998, Rizzo and Towse 2002, van der Aa 2005 and the more general monographs and collections by Frey 2003, Ginsburgh 2004, Ginsburgh and Throsby 2006, Towse 1997, 2003 and Throsby 2001. The consequences of being listed, in particular on the number of visitors frequenting these sites are studied e.g. in Bonet 2003 or Tisdell and Wilson 2002.

proposal focuses on those parts of heritage, which are considered to belong to humanity. This concept that regards cultural heritage as a global public good is normative in the sense that it is not necessarily perceived as such by the public, interest groups or the government (see below). The proposal advanced here, thus follows the *intention* of the UNESCO World Heritage Convention, and seeks a way to achieve its goal of preservation as efficiently as possible. There are many cultural heritage sites that combine both public and private good attributes. We are not concerned here with the many cases of local cultural public goods.

The proposal advanced here, is informed by programs designed to solve the global environmental problems, such as climate change (see e.g. Tietenberg 2006, Stern 2007, Antes et al. 2008): Incentives are provided to overcome the common pool problem of reducing externalities by coordinating action.

Another analogy is NATO⁴ whose goal is to promote the collective defense of its member states. “Indicators of responsibility” have been devised to assess the relative burdens falling to the individual member states.

II. Outline of the Proposal

The goal of the World Heritage movement should be the preservation of *World Heritage sites to the largest possible extent by spending as few resources as possible*.

Restrictions pertaining to a minimum amount of resources spent are crucial and correspond to the very foundation of economics. Resources are limited; and this applies in particular to the resources spent on cultural preservation. The problem outlined here, that some (poor) countries spend very little on preserving their heritage could be easily solved by compelling the richer countries to pick up the bill. However,

⁴ I owe this point to Sir Alan Peacock.

this remains wishful thinking. It certainly cannot be a lack of information that prevents a flow of resources to the restoration of the monuments in dire need of preservation. To come back to the example above: everyone knows about the terrible state of repair of the culturally most valuable buildings in Havana but for many different reasons the flow of money does not take place. To be put on the List of World Heritage⁵ does not lead to any significant support by UNESCO. Indeed, according to the official “World Heritage Information Kit” (March 2005: 11) “The World Heritage Fund receives a total amount each year of just under US\$ 4 million” which is minimal compared to the existing needs.

A viable proposal must therefore presuppose a limited amount of resources devoted to the preservation of cultural heritage. The effort must lie in the distribution of the resources available in such a way that the world heritage is globally improved as comprehensively as possible.

⁵ Two Advisory Bodies, the International Council on Monuments and Sites (ICOMOS), for cultural sites and the World Conservation Unit (IUCN), for natural sites, do evaluations after a process of careful consideration of ten selection criteria. This paper does not criticize the choices made, though they are (as any such list) debatable (it is, for instance, unclear why Heidelberg in Germany and Stein am Rhein in Switzerland are not on the List). Nor is it taken for granted that inclusion in the List guarantees protection, as there may be adverse effects such as the overuse through increased visits by tourists (Machu Picchu being an example, see the Economist 2007:60), the redirection of funds to the disadvantage of other heritage sites, or the increased danger that such sites are explicitly sought out as targets in wars (such as e.g. Dubrovnik during the last Balkan war, see UNESCO 2005:16). Some of these aspects are discussed in Frey and Pamini 2008.

The proposal consists in four steps: (1) Determining what belongs to World Heritage; (2) Agreeing on the financial obligations of individual countries; (3) Assigning Heritage Certificates; (4) Trading World Heritage Certificates.

1. Determining What Belongs to World Heritage

The world community, i.e. the member states of the United Nations, has to agree on what they consider “World Heritage” worth protecting and conserving. UNESCO has done so in its *World Heritage List*. The authors are well aware that this *List* is the result of many compromises, and that it is also subject to political pressures and manipulations (for an econometric study see Frey and Pamini 2008). There are a great many open issues as to which objects of cultural heritage should be included (for instance, should it include all man-made artifacts worthy of preservation for future generations, including moveable works of art such as masterpiece paintings, or should it include only immovable heritage objects). Here, the definition implicit in the *World Heritage List* has been taken as the starting point.

As of August 2008, there were 878 properties on this list, containing 679 cultural, 174 natural and 25 mixed sites in 145 countries of the world. The List is continually expanded in particular because so far no site has ever been removed⁶. The list contains very different properties, even if one only considers its main emphasis, *cultural* heritage⁷. The sites range from entire cities (such as Trinidad in Cuba, Quedlinburg in

⁶ The expansion covers ever-new areas. According to a press report (Neue Zuercher Zeitung 2008), French president Sarkozy promised to lobby for the French cuisine to become part of World Heritage.

⁷ For an analysis of natural heritage sites see e.g. Tisdell and Wilson 2002 or Driml 2002.

Germany, Tallinn, Riga and Vilnius in the three Baltic States or Dubrovnik in Croatia) to individual buildings (such as the Acropolis in Athens, the Tower of London, the Taj Mahal or the Abbey in Lorsch, Germany).

For our proposal it is necessary that the items on the list can be compared. The experts compiling the list must indicate how many “*World Heritage Units*” (WHU) are involved in each site. This requires a comparison between individual aspects of various sites. The WHU must refer to the fundamental cultural importance of a site rather than to the extent of its present state of conservation. To establish such a list of *World Heritage Units* is certainly no easy task. The two Advisory Boards (ICOMOS and IUCN) that are compiling the *List of World Heritage Sites* are already implicitly assigning such criteria when they state how many of the ten selection criteria apply to what extent, and therefore how important it is to preserve a particular site. If a heritage site is in danger of disintegrating completely unless preservation efforts are undertaken, it is assigned more WHUs than a site that is in no immediate danger of irreversible damage. If an entire city with a considerable number of buildings is to be preserved, more WHUs are involved than if only a particular small building is to be preserved. If a heritage sight can be preserved for the time being by a small intervention, less WHUs are assigned than if only a large intervention could save the site.

WHU may be looked at as a “shopping list” indicating, for instance, that the urgent restoration of a particular building in Havana corresponds to 5 WH-units, while the general maintenance of Machu Picchu corresponds to 3 WH-units. The units correspond to the loss of global heritage if the specified project were not carried out within a given year.

The assignment of World Heritage Units to all the sites deemed worth preserving by the experts is a necessary first step in order to make World Heritage truly global.

2. Agreeing on the Obligations of Individual Countries

The world community has to agree about *how many World Heritage Sites are to be preserved* as well as on *the needed contribution of each country* to protect and sustain the World Heritage. The allocation of the burden is to be made in terms of World Heritage Units in order to make it comparable. Each country must be willing to contribute *some* share to preserve the World Heritage in terms of World Heritage Units. The individual countries are forced to be specific rather than to agree in general terms that the preservation of World Heritage is “important”. Equal shares of the burden for each country would certainly be considered unfair as such an arrangement does not take into account the geographical size of a country, the size of its population, and in particular its per capita income level or wealth. As there is no world government, a consensus among the member states must be reached. Such a consensus about what is to be put on the World Heritage List and about the share to be carried by each country is likely to be reached only if the ability to pay, or the per capita income level of a country, as well as its size, is given due weight.

As has been the case with other world problems, such as the preservation of world peace or the natural environment, a consensus is not easily reached, and may even fail completely to be reached. The most likely outcome therefore will be that a few countries will carry most of the financial burden, as is the case with the general UN-budget which is overwhelmingly financed by the United States, Japan and the large European countries. The countries supposed to contribute the largest share of the

World Heritage Units are unlikely to do so unless they are compensated by a larger say in the decision making process. This is analogous to the main contributors to the general UN-budget being permanent members of the Security Council where they have a larger say with respect to the decisions taken. In the case of cultural heritage, a corresponding “World Heritage Board” can be established where the main financial contributors have permanent seats while the main beneficiaries rotate to share the temporary seats.

3. Assigning World Heritage Certificates

Each World Heritage Unit protected is attributed a “*World Heritage Certificate*”.

Each certificate corresponds to one unit of a World Heritage *saved*. Whoever spends resources on the preservation of world heritage properties receives a number of certificates corresponding to the number of World Heritage Units preserved.

Cultural experts have to determine the extent to which a certain preservation activity contributes indeed to safeguarding World Heritage Units. If, for example, a preservation activity is done superficially, in an incompetent or even damaging way, no certificate is assigned. The UNESCO World Heritage Fund and the two Advisory Boards ICOMOS and IUCN are an obvious choice to administer this program.

In order to appreciate how the scheme works, it is useful to consider specific situations. In the following, three cases will be discussed.

Case A. Consider the extreme case of a country that does not have any recognized World Heritage sites but which agrees (in step 2) to contribute a particular number of Units to the preservation of World Heritage. This obligation can be met by financing

the preservation of World Heritage Units abroad, and to therewith acquire World Heritage Certificates. The country has an incentive to search for World Heritage sites, which offer the highest possible number of World Heritage Certificates in return for the funds pledged. The suppliers of funds have an incentive to seek and support those World Heritage Sites most in need of preservation.

The country committing funds therewith acquires a number of Heritage Certificates documenting the fact that it has contributed to this extent to the preservation of World Heritage. If the country accumulates sufficient Heritage Certificates to meet its obligations it has acted as a good member of the global community. At the same time it has helped to efficiently secure the preservation of World Heritage.

Case B. Consider now the opposite extreme case, a country with a larger number of World Heritage Units to be preserved within its borders but with only limited or no financial means for this purpose. Such a country has an incentive to attract donors to save its sites by offering attractive opportunities to do so. It makes an effort to preserve its World Heritage Units at the lowest cost possible so that the corresponding certificates have a low price. The cheaper the price of the certificate, the more Heritage Certificates potential donors would receive for a given sum of money. The (potential) recipient country is motivated to become active and to make internationally known what sites it has, and what the financial requirements are for preserving them. The applicants for funds have an incentive to become active and to therefore provide the most efficient preservation of World Heritage Sites.

Case C. A country has agreed to preserve within its borders a given number of World Heritage Units in step 2. However, cultural experts have classified these sites to be of

(relatively) little importance. To save national cultural sites provides few Heritage Certificates in contrast to preserving Heritage sites abroad. The decision makers in this country are confronted with a trade-off. They can spend the money designated for cultural preservation for national sites, in which case they accumulate only a few World Heritage Certificates. Alternatively, they can spend the funds to preserve foreign World Heritage Sites that offer cheaper certificates, thus they can more easily fulfill their international obligations. In most cases, a mixed solution will be the best: some money will be spent on domestic sites for which a unit of money has most effect on preservation (i.e. where the Certificates are relatively cheap) but it would be a waste of money to keep spending on domestic sites when much cheaper World Heritage Certificates may be acquired by spending the money on foreign sites with much greater effect (and therefore cheap certificates per unit of money). The scheme thus takes into account the marginal productivities of spending money on preserving sites and gives financial incentives to individual countries to spend money, designated for preservation, where it is most needed according to the evaluation of the cultural experts.

4. Trading World Heritage Certificates

So far only monetary contributions to the preservation of World Heritage sites were considered. Opening up a market in which to trade the certificates increases the probability that such sites will be preserved, especially in developing countries. Poor countries may acquire World Heritage Certificates by specializing in preserving World Heritage sites. The preservation of cultural and natural heritage sites is a labor-

intensive activity⁸ in which poor countries with much hidden or open unemployment have a relative advantage. Such a country may engage in a program with the goal of saving the maximum possible number of World Heritage Units within its borders. They thereby acquire World Heritage Certificates, which they can sell to countries that have less productive possibilities to preserve World Heritage. A developing country may sell its services to produce World Heritage Units at a favorable price in any country enabling it to acquire Certificates. If the number exceeds the sum agreed on in step 2, they can sell the surplus on the open market.

Moreover, *for-profit firms* may become active and offer to undertake the preservation of specific World Heritage sites. They will be compensated through the certificates acquired, which they can sell in the market. This opens a new area of activity for private enterprise even in cases in which heritage is a public good, i.e. where the benefits of its existence cannot be privately exploited⁹. The scheme also establishes competition between public actors, which so far have had a monopolistic situation in most countries and areas of public heritage preservation.

On the demand side, Heritage Certificates enable private organizations, in particular NGOs devoted to the preservation of culture, to directly participate in saving disregarded World Heritage sites rather than having to rely on political lobbying with uncertain outcomes. They can acquire as many certificates as they choose which tends

⁸ But expert guidance is also needed so that the preservation activity leads to World Heritage Certificates. This can be achieved by hiring foreign experts, and to train the work force to do the preservation work according to the standards set.

⁹ Private activities have, of course, played a major role to preserve cultural heritage in cases in which the benefits of the sites could be privately exploited, especially for tourism.

to raise their price and provides an incentive to governments and private firms to undertake additional preservation efforts.

Tradeable World Heritage Certificates have the advantage of producing generally accessible knowledge about which sites should be preserved; they profit from the Hayekian process of generating information through markets.

III. Political Feasibility

A few years ago a scheme as the one that has been suggested here, based on tradable international certificates, would have been considered outlandish. But circumstances have changed, mainly due to the successful introduction of such schemes as the ones for environmental protection¹⁰. The goal is the same: to achieve maximum effect globally with the lowest cost of resources. The certificate system proposed here is in one respect more feasible than some of the tradable environmental schemes because the number of World Heritage sites is very large and so trading is not hampered by a low number of traders and monopolistic distortions (see e.g. Ellerman and Buchner 2007). As environmental certificates have slowly started to be appreciated by politicians and the public, it could be expected that a similar scheme for cultural preservation would also be acceptable.

Nevertheless, much opposition is to be expected. In most countries, “culture” is still considered a “national affair”. Many people are convinced that each country should, first and foremost, care for its own cultural sites. As the funds for these preservation activities are normally quite limited, this means in effect that all is spent on national sites but possibly with strongly decreasing marginal returns. Only on special

¹⁰ See e.g. Insley 2003, Tietenberg 2006, Antes et al. 2008, Krysiak 2008.

occasions when a spectacular cultural monument in a foreign country is to be saved (such as the Abu Simbel temple), a country's decision makers are prepared to spend money for that purpose abroad. The argument that the issue serves not the preservation of *national* culture but the *culture of humankind as a whole* probably carries little weight in environments fixated on national issues.

Our proposal for *World Culture Certificates* may be opposed because the sites selected are treated as merit goods whose value are determined by a set of experts chosen by UNESCO. However, the culture certificate scheme proposed here does not depend on who determines the list; it could also be achieved through a democratic process. Our proposal serves to achieve an efficient use of resources to protect the international public good of World Heritage, however this term is defined.

Interest groups concerned with preserving culture will strongly oppose the globalization underlying the proposed scheme, as they are – at least up to the present – almost entirely organized nationally. Seen from that point of view, to globally maximize the extent of cultural preservation, achieved through a given sum of money could be considered to betray a country's interests.

However, not all organized groups that are politically powerful will oppose the Heritage Certificate scheme. The more people travel abroad and visit foreign cultural monuments the more interested will be the firms engaged in international tourism that the respective cultural monuments are well preserved. They will welcome such a scheme¹¹. More generally, globalization cannot be stopped and it can be expected that more and more persons embrace points of view that go beyond the sole interests of

¹¹ But the national tourist boards will oppose it because they benefit from the money being spent for monuments in their own country and region.

their own nation. The preservation of the culture of humankind is likely to become increasingly appreciated.

IV. Conclusions

The *World Culture Certificates* proposed here intend to maximize the effect of the financial resources spent on the preservation of World Heritage sites. At present, some (rich) countries spend a lot of money on the preservation of cultural monuments that are of only secondary importance while at the same time in other (poor) countries highly valuable cultural monuments fall into ruins for lack of money. In regard to the preservation of humankind's cultural goods, this is a waste of resources. The World Culture Certificate scheme induces nations to spend the money where it produces the greatest effect on preserving world heritage. The community of nations, as embodied by the United Nations, has to establish how many World Heritage Units each nation is prepared to save. Each World Heritage Unit saved anywhere in the world is acknowledged by a certificate. The cost of a certificate is the lower the less expensive it is to accomplish saving a World Heritage Site. It is, therefore, advantageous to countries not to only concentrate on saving their national heritage (which may be very expensive due to decreasing returns) but also to seek sites where funds can be expended most productively and therewith the World Heritage Certificates can be acquired most inexpensively. This leads to an efficient allocation of resources from a global point of view. Poor countries with only very limited available funds to protect their cultural heritage can commit to protecting their monuments and to therewith acquire certificates they will be able to sell in the market. As the preservation of cultural monuments is a labor-intensive activity, the certificate scheme offers a new

way for poor countries to develop economically, and at the same time allows them to preserve their cultural heritage.

A major advantage of World Heritage Certificates is that actors interested in preserving the “earth’s cultural and natural heritage” can do so directly, effectively and in a sustainable manner. Under present conditions the preservation of the global cultural heritage often depends on political uncertainties: sometimes the international community can be mobilized to rescue a particular site (as was the case for Abu Simbel) but in many cases such mobilization is ineffective or comes late. Moreover, private firms may engage in saving World Heritage sites by acquiring certificates whose contribution to preserving World Heritage has been approved by experts.

The proposal of *World Culture Certificates* advanced here is certainly only one possibility to protect the global heritage of culture. It needs to be considered and examined in contrast to other attempts (which are, however, sadly lacking) to reach the same goal. Many arguments against the propagated scheme are possible. An important one is that the organization in charge, UNESCO, suffers from all the problems Public Choice theory associates with large bureaucracies (see, in general, Mueller 2003, and for the case of heritage Peacock and Rizzo 2008). The authors fully appreciate these concerns (see e.g. Frey 1983, 2001) but nevertheless think that it is worthwhile to suggest a proposal to save World Heritage in danger of destruction.

References

Antes, Ralf; Bernd Hansjürgens and Peter Letmathe (2008). *Emissions Trading. Institutional Design, Decision Making and Corporate Strategies*. New York, Springer.

- Benhamou, Françoise (1996). Is Increased Public Spending for the Preservation of Historic Monuments Inevitable? The French Case. *Journal of Cultural Economics* 20: 115-131.
- Benhamou, Françoise (2003). Heritage. In: Ruth Towse (ed.). *A Handbook of Cultural Economics*. Cheltenham, UK, and Northampton, MA, USA: Edward Elgar. 255-262.
- Benhamou, Françoise (2004). Who Owns Cultural Goods? The Case of Built Heritage. In: Victor A. Ginsburgh (ed.). *Economics of Art and Culture*. Amsterdam: Elsevier. 187-202.
- Bonet, Lluís (2003). Cultural tourism. In: Ruth Towse (ed.). *A Handbook of Cultural Economics*. Cheltenham, UK, and Northampton, MA, USA: Edward Elgar. 187-193.
- Driml, Sally (2002). Travel Cost Analysis of Recreation Value in the Wet Tropics World Heritage Area. *Economic Analysis and Policy* 32: 11-26
- Economist (2007). Wonders of the world. Reluctant marvels. June 30th, p. 60.
- Ellerman, A. Denny and Barbara K. Buchner (2007). The European Union Emission Trading Scheme: Origins, Allocation and Early Results. *Review of Environmental Economics and Policy* 1: 66-87.
- Frey, Bruno S. (1983). *Democratic Economic Policy*. Oxford: Blackwell.
- Frey, Bruno S. (1997). The Evaluation of Cultural Heritage. Some Critical Issues. In: Michael Hutter and Ilde Rizzo (eds.). *Economic Perspectives on Cultural Heritage*. London: Macmillan.
- Frey, Bruno S. (2001). *Inspiring Economics. Human Motivation in Political Economy*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar.

- Frey, Bruno S. (2003). *Arts and Economics. Analysis and Cultural Policy*. Berlin, Heidelberg and New York: Springer, 2nd ed.
- Frey, Bruno S. and Paolo Pamini (2008). What Is on the World Heritage List? An Econometric Analysis. Mimeo, Institute for Empirical Research in Economics, University of Zurich.
- Ginsburgh, Victor A. (ed.) (2004). *Economics of Art and Culture*. Amsterdam: Elsevier.
- Ginsburgh, Victor A. and David Throsby (eds.) (2006). *Handbook of the Economics of Art and Culture*. Vol. 1. Amsterdam: Elsevier.
- Greffe, Xavier (1999). *La gestion du patrimoine culturel*. Paris: Anthropos.
- Hutter, Michael and Ilde Rizzo (eds.) (1997). *Economic Perspectives on Cultural Heritage*. London: Macmillan.
- Insley, Margaret (2003). On the Options to Invest in Pollution Control under a Regime of Tradable Emission Allowances. *Canadian Journal of Economics* 36: 860-883.
- Klamer, Arjo and David Throsby (2000). Paying for the Past: the Economics of Cultural Heritage. *World Culture Report*. New York: UNESCO. 130-145.
- Krysiak, Frank (2008). Ex-post Efficient Permit Markets: A Detailed Analysis. *Environmental and Resource Economics* 39(4): 397-410.
- Mossetto, Gianfranco (1994). The Economic Dilemma of Heritage Preservation. In: Alan Peacock and Ilde Rizzo (eds). *Cultural Economics and Cultural Policies*. Dordrecht: Kluwer.
- Mossetto, Gianfranco and Marilena Vecco (2001). *Economia del patrimonio monumentale*. Venice: F. Angeli.
- Mueller, Dennis (2003). *Public Choice III*. Cambridge: Cambridge University Press.

- Netzer, Dick (1998). International Aspects of Heritage Policies. In: Alan Peacock (ed.) *Does the Past Have a Future? The Political Economy of Heritage*. London: Institute of Economic Affairs. 135-154.
- Neue Zuercher Zeitung (2008). Franzoesische Kueche als Weltkulturerbe. *NZZ Online*, 23 February.
- Peacock, Alan (1978). Preserving the past: an international economic dilemma. *Journal of Cultural Economics* 2: 1-11.
- Peacock, Alan (1995). A Future for the Past: The Political Economy of Heritage. Keynes Lecture in Economics. *Proceedings of the British Academy* 87: 189-243. Reprinted in Ruth Towse (ed.) (1997). *Cultural Economics: the Arts, Heritage and the Media Industries*. Aldershot: Edward Elgar. 387-424.
- Peacock, Alan (ed.) (1998). *Does the Past Have a Future? The Political Economy of Heritage*. London: Institute of Economic Affairs. 135-154.
- Peacock, Alan (2004). The Credibility of Cultural Economists' Advice to Governments. In: Victor A. Ginsburgh (ed.). *Economics of Art and Culture*. Amsterdam: Elsevier. 165-186.
- Peacock, Alan and Ilde Rizzo (2008). *The Heritage Game. Economics, Politics, and Practice*. Oxford: Oxford University Press.
- Rizzo, Ilde and Ruth Towse (eds.) (2002). *The Economics of Heritage*. Cheltenham, UK, and Northampton, MA, USA: Edward Elgar.
- Rizzo, Ilde (2006). Cultural Heritage: Economic Analysis and Public Policy. In: Victor A. Ginsburgh and David Throsby (eds.). *Handbook of the Economics of Art and Culture*. Vol. 1. Amsterdam: Elsevier. 983-1016.
- Stern, Nicholas (2007). *The Economics of Climate Change: The Stern Review*. Cambridge University Press: Cambridge

- Streeten, Paul (2006). Culture and Economic Development. In: Victor A. Ginsburgh and David Throsby (eds.). *Handbook of the Economics of Art and Culture*. Vol. 1. Amsterdam: Elsevier. 399-412.
- Throsby, David (1997a). Sustainability and culture: some theoretical issues. *International Journal of Cultural Policy* 4: 7-20.
- Throsby, David (1997b). Seven Questions in the Economics of Cultural Heritage. In: Michael Hutter and Ilde Rizzo (eds.). *Economic Perspectives on Cultural Heritage*. London: Macmillan. 13-30.
- Throsby, David (2001). *Economics and Culture*. Cambridge: Cambridge University Press.
- Throsby, David (2003). Cultural sustainability. In: Ruth Towse (ed.). *A Handbook of Cultural Economics*. Cheltenham, UK, and Northampton, MA, USA: Edward Elgar. 183-186.
- Tietenberg, Thomas H. (2006). *Emissions Trading: Principles and Practice*. RFF Press: Washington DC.
- Tisdell, Clement and Clevo Wilson (2002). World Heritage Listing of Australian Natural Sites: Tourism Stimulus and its Economic Value. *Economic Analysis and Policy* 32: 27-49.
- Towse, Ruth (1997). *Cultural Economics: the Arts, Heritage and the Media Industries*. Aldershot: Edward Elgar.
- Towse, Ruth (ed.) (2003). *A Handbook of Cultural Economics*. Cheltenham, UK, and Northampton, MA, USA: Edward Elgar. 255-262.
- UNESCO (2005). World Heritage Information Kit. UNESCO World Heritage Centre, Paris.

Van der Aa, Bart J.M. (2005). *Preserving the heritage of humanity? Obtaining world heritage status and the impacts of listing*. Doctoral thesis, Netherlands Organisation for Scientific Research.